www.jmscr.igmpublication.org
Impact Factor (SJIF): 6.379
Index Copernicus Value: 71.58
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossrefDOI: https://dx.doi.org/10.18535/jmscr/v6i7.133

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Factors Affecting Knowledge Regarding Hypertension among Hypertensive Patients: A Cross-Sectional Hospital Based Study

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Abstract
Background: *Knowledge leads to practice and practice leads to control. Hypertension is a leading cause of morbidity and mortality in today's world as its prevalence has increased owing to the changing lifestyle, urbanization and eating habits.*
Objective: *To determine the knowledge regarding hypertension among the hypertensive patients.*
Methodology: *This cross-sectional study was carried out in PHC Harwan of block Hazratbal which comes in the field practice of the department of Community Medicine, Government Medical College, Srinagar. The study period was one month, March 2018. After taking an informed consent, hypertensive patients coming to PHC Harwan were interviewed by a self-designed pre-structured questionnaire*
Results: *There is a strong correlation between the knowledge regarding hypertension and time since diagnosis and also between knowledge and years of schooling.*
Conclusion: *Education should be given in the schools regarding ways and means to prevent the occurrence and progress of diseases of public health importance.*

Introduction

Knowledge leads to practice and practice leads to control. Hypertension is a leading cause of morbidity and mortality in today's world as its prevalence has increased owing to the changing lifestyle, urbanization and eating habits. Hypertension is often regarded as a "silent killer" since it often remains undiagnosed and even if it gets diagnosed only half of the people take treatment. It's known to follow the "rule of halves"[(1)]. The prevalence of hypertension in India has been reported to be around 30%[(2)]. There's is an increasing trend in the prevalence of hypertension in the country[(3)]. Hypertension can lead to stroke, coronary heart disease and other vascular complications.[(1)] The causes of uncontrolled hypertension may be smoking, decreased physical activity and irregularity of treatment[(4)]. A study conducted in Maharashtra showed that age, sex, marital status, wealth status and BMI are significantly associated with hypertension[(5)]. Lack of knowledge about the risk

factors, complications, and treatment about hypertension may be yet another factor because those who don't know about it are less likely to take this problem seriously and stick to the treatment or adopt healthy lifestyle.

India is a developing country. People often do not care to know about prevention of diseases. Rather only after getting a disease, they come to know about it and the means of preventing and controlling it from the physician or by other means. Thus the objective of our study was to determine the knowledge regarding hypertension among the hypertensive patients.

Methodology

This cross-sectional study was carried out in PHC Harwan of block Hazratbal which comes in the field practice area of the department of Community Medicine, Government Medical College, Srinagar. The study period was one month, March 2018. After taking an informed consent, hypertensive patients coming to PHC Harwan were interviewed by a self-designed pre-structured questionnaire (Appendix 1). Each question was given a score of 1 if answered correctly and 0 if wrong answer was given. Total score was calculated for each of the participants.

Statistical analysis: Data was analysed using SPSS version 23.

The data did not follow the normal distribution perfectly. Non parametric tests have been used.

Results

In our study we had 100 participants. The age, sex and other characteristics of the participants are given in table 1.

Table 1: Characteristics of the participants

		Number (%)
Sex	Male	61(61%)
	Female	39(39%)
Age in years	20-30	5(5%)
	31-40	18(18%)
	41-50	22(22%)
	51-60	18(18%)
	61 and above	37(37%)
Years of schooling	Never went to school	41(41%)
	1-5	8(8%)
	6-10	17(17%)
	>10 years	34(34%)
Time since diagnosis (in years)	≤ 1	2(2%)
	2-5	30(30%)
	6-10	63(63%)
	>10	5(5%)
	Total	100(100%)

In our study majority of the patients were male (61%) and majority were in the age-group of above 60 years. Majority of the patients had never gone to school.

Men seemed to have more knowledge compared to women.(table 2)

		Median	P value on Mann Whitney U test
Knowledge(total-score)	Male	16	0.000
	Female	13	
Education (years of schooling)	Male	8	0.006
	Female	0	

Table 2: Mann Whitney test showing the median values of knowledge differed between men (16) and women (13). It may be attributed to more years of schooling in men compared to women.

We tried to find out the knowledge regarding hypertension in terms of total score obtained by a participant.

Table 3: Shows the correlation between total score and other parameters.

CORRELATIONS					
			Time since diagnosis	Education (years of schooling)	Age
Spearman's rho	Total score (knowledge)	Correlation Coefficient	.447	.768	-.375
		P value	0.000	0.000	0.000
		N(number of participants)	100	100	100
	Age	Correlation Coefficient		-.538	
		P value		0.000	.

Table 3 There is a very strong correlation between education and total score. Also the correlation between the time since diagnosis and knowledge is strong. There is a negative correlation between age and knowledge and also between age and years of schooling.

Discussion

In our study we had more males compared to females which may be because we received male hypertensive patients more commonly than females suggesting that hypertension may be more common in males in that area for which further studies need to be conducted. Prevalence of hypertension has been reported to be higher in men compared to women in many studies[(6)].

Our participants were more from the older age group and it's a proven fact that blood pressure increases with age[(7)].

We found that knowledge among men was more compared to women. It may be attributed to more years of schooling in men compared to women.

We got a positive and statistically significant correlation between time since diagnosis of hypertension and knowledge which is a well understood fact that after diagnosis people become more keen to know about their disease and seek knowledge about it. In developing countries more stress is laid on secondary prevention whereas we should focus more on primary prevention. Studies should be conducted to determine the knowledge regarding hypertension in the people who are not hypertensive.

There is a very strong positive and significant correlation between education and knowledge. Such finding needs no explanation but it lays emphasis on the importance of education which makes people aware regarding the various important health conditions and how to prevent them from occurring and their further progress. Education regarding healthy lifestyle and primordial and primary prevention against various disease conditions of public health importance should be incorporated within the school education.

There's a negative correlation between age and knowledge regarding hypertension as older people have lesser years of schooling according to our study which is well understood as there was less literacy in past compared to what it is now. Besides modern generation has access to information like never before through internet.

Conclusion

The positive correlation between years of schooling and knowledge shows the importance of education. Education should be given in the schools regarding ways and means to prevent the occurrence and progress of diseases of public health importance.

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Appendix 1

Questionnaire administered to participants:

A. Basic questions:
   1. What is normal blood pressure (value)?
   2. What are the upper and lower values called?

B. Do the following factors affect blood pressure:
   1. Age : yes/no/don't know
   2. Family history : yes/no/don't know
   3. Diet : yes/no/don't know
   4. Physical activity : yes/no/don't know
   5. Obesity : yes/no/don't know
   6. Smoking and alcohol : yes/no/don't know

C. Which of the following can be the consequences of hypertension:
   1. Retinal damage : yes/no/don't know
   2. Kidney damage : yes/no/don't know
   3. Stroke : yes/no/don't know
   4. Cardiac failure : yes/no/don't know
   5. Heart attack(myocardial infarction) : yes/no/don't know

D. Which of the following are the preventive measures
   1. Decreased salt intake : yes/no/don't know
   2. Exercise : yes/no/don't know
   3. Maintaining weight : yes/no/don't know
   4. Quitting smoking : yes/no/don't know